

## ABSTRACT:

Disclosed is a hydrogen storage material comprising a magnesium-containing intermetallic compound which can form a hydride with hydrogen. The intermetallic compound comprises an alloy of magnesium and a trivalent metal selected from the group of Sc, Y, La and the rare earth elements. Preferably, the intermetallic compound comprises a scandium-magnesium alloy. In an advantageous embodiment, the hydrogen storage material also comprises a catalytically active material.

Furthermore, an electrochemically active material, as well as an electrochemical cell comprising the above hydrogen storage material are disclosed.